

# White Paper

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**WHITE PAPER**

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*Digital Humanities for Lifelong Learners*

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WGBH Educational Foundation

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The WGBH Educational Foundation received a Level-I Start-Up Grant award from the National Endowment for the Humanities *to research a cost-effective solution that allows public media organizations and other humanities libraries to deliver online, media-based experiences to seniors throughout the U.S., built around the materials in our collective archives.*” Toward such ends, WGBH convened leading thinkers in the fields of lifelong learning and humanities education together with archivists and technologists in a series of in-person and virtual meetings, administered an online survey, and conducted additional research between July and December 2015. This report reviews project activities and summarizes major findings and recommendations.

## **BACKGROUND**

*American Experience. Columbus and the Age of Discovery. God in America. The Machine That Changed the World. Vietnam: A Television History. War and Peace in the Nuclear Age.* These are just a few examples of the humanities-based television programs produced by WGBH over the last four decades, much of it originally created with the financial support of the NEH. Such premier programming can be of particular interest to seniors, and numerous studies have shown that lifelong learning enhances social inclusion, self-confidence, and active citizenship. Additionally, ten thousand Baby Boomers (people born between 1946 and 1964) have turned 65 every day since 2011 — a pace that will continue until 2029, making this a rapidly increasing demographic. Seniors are underserved by most educational outreach programs, but this population often has the time and enthusiasm to benefit from the intellectual stimulation and social engagement offered by media-based resources, and as a group, is increasingly comfortable with digital technology.

The ***Digital Humanities For Lifelong Learners*** project was proposed to determine how best to use public media’s archive of humanities programming to create a robust library of cross-disciplinary humanities modules for this eager audience of lifelong learners. Some of the best programming produced by public television, however, is sitting unused on archive shelves. And perhaps even more problematic, at a time when the proliferation of digital technologies provides new ways for such humanities materials to be used, most of the rights to distribute or display the programs have either lapsed or were never cleared for new media usage. And the cost of renewing third-party and/or performance rights is, for the most part, prohibitive.

WGBH has extensive experience in negotiating such rights clearances, and for the past 15 years has been successfully applying that knowledge to the development of a digital library featuring its archival assets specifically for educational purposes. Through an initiative originally called *Teachers Domain* and currently presented as *PBS LearningMedia* (<http://www.pbslearningmedia.org/>), public media assets from across the system have been reversioned, annotated, and organized to meet the specific needs of K-12 teachers and students. This service now includes over 100,000 educational resources and has a registered user base of 1.7 million, providing a potentially useful model for the

proposed new initiative targeting lifelong learning by older populations. The NEH proposal was written in recognition of the need to generate additional research on such possibilities, however, as the interests and capacities of lifelong learners differ from those of K-12 teachers and students.

## **LANDSCAPE**

An environmental scan reveals that the demand for lifelong learning among seniors is already high and increasing steadily as the Baby-Boomers move into retirement. In Massachusetts alone there are more than 15 institutes offering seminars and workshops to this population, and this does not include growing numbers of programs at museums, cultural institutions, universities and libraries. Nationwide, there are programs such as One Day University, which hosts events throughout the country featuring live lectures by university professors, and the well-known Osher Learning Institutes located at more than 100 college campuses across the U.S.

The first formal “learning-in-retirement” program in the United States was launched at the New School for Social Research in 1962, with dozens of similar programs to follow, including the Fromm Institute, Road Scholar, and Elderhostels — all were inspired by the reports and articles on “the greying of America.” More recently, some organizations have taken an additional step, providing *on-campus* housing and assisted care for seniors who wished to make a commitment to lifelong learning. One example is Lasell Village, on the campus of Lasell College in Massachusetts. Senior residents can purchase a condo in the campus village and pay a service fee each month that covers assistance and education. Residents must commit to taking 450 hours of classes each year. At Lasell Village, where posh senior residences are located near student dormitories, seniors can pay \$600,000 to \$1 million for a condominium. In addition, they can pay from \$3,000 to \$5,000 per month for services, which range from house-cleaning and daily dining to the classes on campus.

Another source of lifelong learning opportunities is the exploding number of online offerings, including Massive Open Online Courses (MOOCs), which are available to students of any age. EdX, Udacity, and Coursera are the leading purveyors of such opportunities, presenting courses run by faculty at the world’s most prestigious universities. Numerous alumni associations, such as Princeton’s, offer online courses behind a pay wall, and other organizations such as Academic Earth and University of the Third Age also provide such digital learning opportunities for seniors. These are all well-established initiatives with paid staff and college professors who are accustomed to designing classes, and many are handsomely funded.

The fairly recent rise of the open education movement has prompted an increasing amount of online educational programming, but these MOOCs and OpenCourseWare (i.e., the online sharing of searchable college course content through programs such as Tufts OpenCourseware, NotreDameOpenCourseWare, OpenMichigan, and so on) and non-affiliated online education sites such as Khan Academy, are based on formal classwork on the college level and often are not tailored to the needs or interests of lifelong learners.

Another potentially relevant project is OVEE, an online social TV experience from ITVS, funded by the Corporation for Public Broadcasting. Public television stations use the platform to show full-length programs, clips, or previews, and engage the audience in a chat room-style discussion. This allows the viewer to ask questions, make comments, and get live feedback from other viewers as well as from the presenter, who is often able to add anecdotes, insight, and context to the program. OVEE is not geared to senior learners, however, who often have unique needs for a simple user interface and are less familiar with the process and fast pace of online discussions. In addition, most OVEE programs require the audience to watch live at specific times, rather than on-demand.

The following table presents a sampling of various lifelong learning projects according to “geography”—where they are offered.

Lifelong Learning Initiatives

Location	Examples	Who guides/Fee?
<b>University, college campuses</b> (seniors live near campus)	Alumni Studies (Princeton, e.g.) Fromm Institute Osher Lifelong Learning Institutes	Professors, self/Pay wall
<b>University, college campuses</b> (seniors live on campus)	Lasell Village Campus Continuum UBRCs (ubased retirement communities)	Professors/steep fees Professors/fees Professors/fees
<b>Online Courses, Videos</b>	University of the Third Age Pioneer Network (for caregivers) Alumni Studies Academic Earth MOOC Great Courses* Leading Age AARP Tek website MMlearn.org (for caregivers & seniors) Mather Institute on Aging (for caregivers)	Self, in England/free Self, webinars/free Self, prof/pay wall Self/ free Prof, self/free Self/fee Self/fee Self-guiding/free Self/free Self for caregivers/free
<b>Misc locations, in person</b>	Road Scholar/Elderhostel One Day University	Trained staff/fee Guest lecturers/fee

<b>Senior Centers</b>	Senior Planet, OATS	Volunteers, staff/free
	National Institute of Senior Centers (NCOA)	Volunteers, staff/free
	Café Plus (Mather Lifeways)	Staff, self
	SeniorNet, computer classes	Staff
	Oasis Connections, computer classes	Staff
<b>Libraries</b>	Next Chapter, NY Public Library	Librarians/free
	Senior Moments, Brooklyn Public Library	
	The Free Library of Philadelphia	
<b>Assisted Living Institutions</b>	Numerous, including Brookdale	Activity Directors
	Senior Living Residences (11 in MA)	
	Five Star Quality Care	
<b>Home</b>	Home Health Care (HHC) (VNSYN, e.g.)	Caregivers
	Community rooms of HUD senior housing	Self, activity leaders

### ***DIGITAL HUMANITIES FOR LIFELONG LEARNING***

Conducted from July-December 2015, this planning grant from NEH featured extensive research, both live and virtual meetings with experts, and an online survey of potential users.

In preparation for the proposal, WGBH met with representatives from the Boston Public Library, Hebrew Senior Life, and Osher Lifelong Learning Institute for an initial discussion about an archival initiative for lifelong learners. Excerpts of the 1983 series *Vietnam: A Television History* were shown along with a brief excerpt from a poetry series featuring Professor Lisa New of Harvard University. The goal of the meeting was to gauge interest in this initiative and to solicit reactions to a range of excerpted archival material. In-house staff then conducted an environmental scan, assembling information about existing lifelong learning programs and, specifically, media-based approaches to serving senior citizens through these programs. Phone calls were also made to multiple external consultants recruited for the project, to flesh out the data on existing efforts and assist in defining the focus for future activities. Three examples of presentation formats were assembled as “strawmen” for consideration by the full group of advisors to be convened in the Fall.

A full-day Launch Meeting was conducted at WGBH in early September (agenda attached as Appendix A). Invited participants included representatives of senior care facilities, lifelong learning organizations, public media archives, and academia, as well as highly interested potential consumers of the proposed resources (“enthusiasts”). Three other PBS stations were also represented, bringing the perspective of archivists more focused on local and/or state-based humanities content, complementing the national orientation of WGBH. A list of participants and their affiliations is attached as Appendix B). The meeting was designed to generate data on each of the three central challenges to be addressed in our research:

- WHO: Who is our audience and what is the optimal target age range, where can they be reached? What are potential access issues (e.g., physical limitations, comfort with computers), and how do target users prefer their information to be packaged (e.g., short/long format, edited/unedited, curated collections, free-standing videos), delivered (e.g., with interactivity, contextualization), and consumed (e.g., self-study, facilitator-led, follow lectures, community interaction)?
- WHAT: What content and expert networks do we have to work with and where are they located? What issues complicate use (e.g., rights or storage format) and how can they be accommodated?
- HOW: How can we best use technology to reach our audience and ameliorate logistical issues? What delivery modes should be available (e.g., mobile)? What are the technical challenges/opportunities and how should they be addressed?

Launch Meeting discussions informed the development of an online survey (see Appendix C) which we administered using Survey Monkey instrument. To solicit responses, we sent email to potential senior users of the proposed service as identified by meeting participants. 160 responses were recorded (see Appendix D), addressing questions regarding desired topics, formats, length, and a wide range of additional related subjects.

## **FINDINGS**

Presented below are the project’s major findings, organized by the three central challenges, shorthanded as: Audience, Content, and Design/Delivery.

### **Audience**

The current generation of seniors is aging with vigor. Eighty is the new 40! For decades, Americans have been told that the population is “greying.” One in every eight Americans is a senior, which is often defined as 65 and older. What’s new is the speed at which the population is greying. According to a recently released Census Bureau report cited in *The New York Times*, the number of Americans 65 and older is expected to nearly double by the middle of the century when they will make up more than a fifth of the nation’s population. That’s more than 2 in every 10 Americans, or 1.6 in every 8. By 2050, 83.7 million Americans will be 65 or older, compared with 43.1 million in 2012.

Another significant development is *how* seniors are aging. On average, seniors are living longer *and* healthier. According to a study by Harvard University and the National Bureau of Economic Research, “Evidence for Significant Compression of Morbidity in the Elderly U.S. Population,” people who were 65 between 1991 and 1993 averaged 17.5 more years of life, with 8.8 of those years being disability-free and 8.7 years being spent with some disabling health conditions. By the 2003-2005 period, average life expectancy only increased to 18.2 years beyond age 65, but the healthy-unhealthy split had shifted to 10.4 disability-free years and 7.8 disabled years, according to the study.

While “lifelong learning” implies the full spectrum of ages beyond formal schooling years, and the term “senior citizen” can include everyone older than 55, our discussions concluded that the optimal target range for our proposed digital education program is between 65 and 80. In the main, these are individuals who are at least close to or in partial retirement (and thus with unoccupied time) but still with the energy as well as mental and physical capacities to engage both productively and enthusiastically with such a digital offering. In terms of accessibility issues, however, our advisors stressed the importance of addressing visual and hearing challenges, using sufficiently large typeface and bright colors, and captioning all video-based information.

We also recognize that both older and younger audiences would be well-served by such a project, offering curated access to public media archives, and that individuals beyond the core target range could (and likely will) exploit the availability of the services provided through such a project.

We found that the target population might embrace the proposed services in any number of locations, from their own homes to retirement/assisted living communities, libraries, senior centers, and lifelong learning programs, but that the greatest traction might be in settings where face-to-face interaction with peers is available. While multiple formats of presentation were advocated, curated collections received the most interest, and survey respondents indicated a preference for long-form videos (e.g., complete and/or unedited chapters of broadcast programs) over shorter segments reversioned specifically for this population. In the main, however, the general consensus was that different formats would suit different audiences, and that in developing this concept WGBH should consider multiple types of resources (e.g., free-standing videos as well as resources with wrap-around information to enhance context as well as understanding of specific media segments).

Respondents were split between wanting this archival material for self-study versus delivery as part of a group experience, perhaps facilitated by an expert and/or accompanied by a lecture on the underlying topic. Others advocated for including curated sets of materials within a formal course structure. Interestingly, we discovered that many existing educational programs for seniors, particularly those in lifelong learning centers, are led by experts who already have established “curricula,” some of which include media segments, making these a less likely target for our work.

Representatives of other public broadcasting stations expressed a particular desire for templates to structure the presentation of video materials from their own archives, responding to viability of the Interactive Lesson tool developed by WGBH for younger audiences. This platform is an innovative means for creating a customized sequence of screens containing media, text, and user-engagement activities in a seamless, visually attractive presentation on *PBS LearningMedia*. Making such tools available would help expand the scope, reach and impact of the proposed resources for seniors, adding local and state-based programming to the mix of available content.

### **Content**

Confirming preliminary research findings, the online survey revealed senior interest in a broad array of subject matter, with the highest concentration in programming tied to history and the arts, followed by health and science. Not surprisingly, “lifestyle” programs targeting such topics as travel and cooking also ranked relatively high. Documentaries scored as the most favored format.

The archives of public media producers are replete with programming in all of these subject areas, including such national broadcast brands as *American Experience*, *Frontline*, *Nature*, and *NOVA* as well as innumerable lifestyle programs and locally produced shows. All of this content is not immediately accessible, however, as copyright issues are both legion and complicated, and paucity of legal documentation for older content hinders the determination of ownership. Media segments may also include materials owned by third parties or may present liability issues, leading to further complications in clearing rights for their use in the kind of education service now being considered for seniors. In addition, the focal content of these resources can change over time, a risk especially relevant in the sciences, resulting in the need for time-consuming and expensive updates on a regular basis.

Digital distribution potentially offers new ways to overcome these obstacles, however, as WGBH has employed in the development of *PBS LearningMedia*. For example, we can identify shorter segments (with manageable rights clearances and costs) that can still convey critical information without compromising the quality of the presentation. In order to provide appropriate contextual storytelling and pedagogical cues, these video elements can be packaged in online modules, with text and graphics, adding new material, such as “wraparound” segments videotaped with scholars and/or footage from the original interviews, to create a compelling learning experience for the target audience.

Almost certainly a less complex strategy for overcoming the rights challenges, however, is to build the proposed digital education service onto archive systems already in place such as WGBH’s Open Vault (<http://openvault.wgbh.org/>), a program that has received funding from NEH (among others) to catalog digital materials and curate an online digital archive and catalog. And Open Vault is already part of the **American Archive of Public Broadcasting (AAPB)**, an unprecedented initiative to preserve and make accessible significant historical content created by public broadcasting and to preserve at-risk public media before its content is lost to posterity. In 2013, the Corporation for Public Broadcasting selected WGBH and the Library of Congress as the permanent stewards of

the AAPB collection. To date, approximately 40,000 hours comprising 68,000 items of historic public television and radio content contributed by more than 100 public media stations and archives across the United States have been digitized for long-term preservation. In October 2015, WGBH and the Library launched the AAPB Online Reading Room, providing online access to nearly 12,000 of the digitized content for research, educational and informational purposes. The entire collection of 40,000 hours is available for research viewing and listening at WGBH and the Library of Congress.

This extraordinary material includes national and local news and public affairs programs, local history productions that document the heritage of our varied regions and communities, and programs dealing with education, social issues, politics, environmental issues, music, art, literature, dance, poetry, religion and even filmmaking on a local level. This archive also includes the full interviews from which segments were pulled for inclusion in broadcast programs, many of which can be easily accessed. The AAPB ensures that this valuable source of American social, cultural and political history and creativity will be saved and made accessible for current and future generations, providing a potential anchor for the proposed new digital education service for seniors.

There have been robust efforts to develop a set of AAPB rights protocols and permissions, reviewing legal and copyright questions to inform a comprehensive strategy that allows access to materials in accordance with third party rights and fair use. In addition to allowing unlimited access to materials on-site, WGBH has established an Online Reading Room ("ORR") — just as in the reading room of a physical archive— where visitors are able to access and view materials but not “check them out.” The ORR makes materials accessible for educational, research, and not for profit purposes to anyone with internet access. The materials must be viewed within the environment of the AAPB website, however, and these resources cannot be downloaded.

In addition, while continuing to gather information about rights and working with stations and independent producers to provide rights clearances, WGBH has made initial broad categorical decisions about fair use. The volume of content in the AAPB is so great that fully cataloging the materials and making detailed access determinations on an item-by-item basis would take decades given current staffing capabilities. With this in mind, the AAPB team decided to determine access to the content in the archive based on a review of material at the level of categories of content. AAPB can then transfer individual items in and out of the ORR based on the subsequent acquisition of more specific rights information.

### **Design/Delivery**

Once the ‘who’ and the ‘what’ have been determined, the most critical questions – the ‘how’ – come into play. Following are recommendations derived from the technologists participating on the project addressing variables related to the digital technology and system architecture needed to best realize the mission.

The long-term success of this project requires the definition of a “future proof” or flexible open sourced technical architecture that will remain applicable as technology progresses.

Fortunately, over the last few years, the industry has converged around a few dominant technology platforms. As a result, we can make judicious decisions about technically feasible, efficient, and operationally viable components for each part of the architecture, and hence for the architecture as a whole.

Outlined below are four important considerations in building and implementing a robust platform to support lifelong learners:

- Defining the target user personas and their use cases;
- Selecting the appropriate delivery mechanism(s) for the customer base;
- Defining a suitable back-end platform for efficient and measurable management of the content and of the community; and
- Content production and workflow: outlining methods for getting the content into the system, also referred to as ingestion.

A visual representation illustration of the recommended architecture decisions is appended to this report (Appendix E).

The **target customers** for lifelong learning are, by definition, older: they are no longer enrolled in a traditional (K-12 or university) education program, are not digital natives, and are certainly not smartphone natives.

This target community can be divided into three segments:

- ‘Digital immigrants,’ who began their professional lives in the analog world, and later embraced the digital world;
- ‘Mixed-signal’ users, who use digital technologies, albeit reluctantly;
- ‘Analog,’ who still do not use digital and are very difficult to reach with digital technologies.

Segmenting the consumer base into these groups, and understanding how each group is likely to access the platform, allows us to make key decisions about the implementation of the platform that will maximize reach among desired customers. These decisions are outlined in the following sections.

The choice of content **delivery mechanism** is critical to the platform as it most directly defines the consumer experience. At the same time, while it is important to provide a platform that is accessible to more than 90% of the target customer base, it is also beneficial to minimize the number of required variants (for example, across operating systems or screen sizes), in order to limit both up-front development effort, and ongoing support and maintenance efforts. The following recommendations are designed to minimize the number of variants that need to be developed while maximizing reach and compatibility.

We recommend designing the platform to be compatible with smartphones and tablets first. Content designed for these devices is also accessible on desktop Mac/PCs, and mobile devices are increasingly used among Americans, including among the target demographic of this project (non-digital natives). The majority of Google web searches in

the U.S. already originate from smartphones and tablets, and going forward content must be optimized for mobile user experience.

**Bandwidth:** While bandwidth is an important consideration, it is safe to assume, for these purposes, that users will have access to sufficient bandwidth (in most cases over LTE cellular or WiFi).

**Screen and Browser Resolutions:** Regarding display sizes and **visual real estate**, the market has largely converged on three dominant screen sizes for smartphones -- 4.7 inches, 5.1 inches, and 5.7 inches -- and three for tablets -- 8 inches, 10 inches, and, increasingly, 12 inches. For all these screen sizes, it is sufficient to design visual content for a 1080p resolution, which is widely supported and is sufficient for the human eye, even on a 12-inch screen.

**Asset types and production methodologies:** We recommend using vector graphics for illustrations that can be scaled/resized with no loss of quality. Video and photographic image production and conversion standards will be established to ensure future compatibility, SEO and Accessibility requirements.

**Experience Design and User Interaction:** Designing for “scalability” and “mobile first” will force design solutions that can be omnipotent on both Desktop browser and Native iOS/Android devices

This approach to delivery mechanisms—taking into account all four types of considerations—addresses the needs of at least 90% of the target audience, minimizing the need to develop and provide ongoing support for designs for other screen sizes, operating systems, and resolution constraints.

To properly implement content delivery, a **back-end platform architecture** must be chosen that facilitates easy site administration, production development, measurement and analysis, 100% uptime, and efficient platform maintenance. The back end is the lower part of the iceberg; the technical, “behind-the-scenes” foundation on which the user interface lies. A cloud-based content and community management platform is recommended, greatly reducing the processing power requirements of the users’ devices, allowing even devices with relatively low capabilities -- namely, those that have solely enough processing power and memory for a single video stream -- to access the platform.

The back-end platform must support two key elements: content and community. The broad definition of **content** includes not only the video or audio content itself, but also any production of assets and associated metadata (tags, rights, etc.) to increase search reach and value for end-user. Specifically, the cloud-based back end should include support for at least four buckets of data:

- Core video content itself, with intuitive navigation controls and bandwidth optimization (e.g., a video lecture);

- Complementary and commentary content, which includes associated textual annotations or voiceovers audio clips that enhance the core content (e.g., on-screen definitions or illustrations of key concepts introduced in the lecture);
- Metadata to characterize and categorize the content (e.g., tags to facilitate access through direct searches, rights management, playlists, and linked themes to encourage exploration); and
- Accessibility and personalization of user experience so that users can configure their viewing settings as needed: (e.g., allowing users to adjust resolution based on their internet quality).

The platform should also enable three key roles for **community** management:

- **Content Contributors** contribute the (raw) core video content, and typically are public media organizations (e.g., uploading the content directly from archives);
- **Content Creators** contribute the complementary content, such as video or text, to complete the video offering (e.g., proposing suggested readings to enhance the learning experience); and
- **Content Curators** build the content community by curating, editing, organizing, and linking metadata to content entries (e.g., associating different videos with each other to facilitate users to navigate across related lessons).

The software development community has converged on a set of well-supported open source platforms to implement web, content, and community platforms. The following combination of well-established and well-supported distributed open source platforms is recommended. Common examples include:

- Django, a web development framework: <http://www.djangoproject.com/>
- Drupal, a content management framework: <http://www.drupal.org/>
- Moodle, a learning environment platform and course management system: <http://www.moodle.org/>
- ffmpeg, a platform-agnostic solution for recording, converting, and streaming multimedia: <http://www.ffmpeg.org/>

Using open source tools enables the efficient creation of a cloud-based content management and community management platform that is flexible, yet robust.

**Content Production and Ingestion.** The process of uploading content into the system requires defined workflow protocol standards for successful adoption and production efficiency. The content for the Lifelong Learning platform is expected to come from public media and/or from other humanities libraries that have video or audio content. Much of this content may need to be digitized; it is important to digitize content in a format that is lossless and widely supported, such that it is digitized once for all platforms: for example, lossless JPEG 2000 for video content, and AAC7 for audio content.

Critical to getting any platform on the ground is ingesting a substantial initial batch of content. It is recommended that:

- To help encourage contributors, minimize the resources required from them to get their existing content digitized and uploaded;
- Use a process that decouples the encoding of the video stream from the process of uploading to the cloud, to increase efficiency; and
- For optimal processing speed, rely on dedicated machines; if not available, use GPU (general processing unit) farm that harnesses idle CPU time on existing machines within a defined network.

Finally, work with contributors to progressively digitize content from the archives using open source software. Store the native digital instances, replicated for redundancy, in low-cost cloud storage. Once content is saved in the cloud, very low cost cloud computing solutions exist that can algorithmically extract metadata from the content, and parse the content into modules, summaries, and excerpts.

## **CONCLUSIONS AND NEXT STEPS**

Given the diversity of need and complexity of variables, WGBH has concluded that there is no single ‘right’ approach to the challenge of getting public media archival resources into the hands and heads of senior citizens. Rather, we advocate for development of a range of strategies for addressing the ‘who,’ ‘what,’ and ‘how’ questions targeted in the planning grant research conducted to date. In sum, we recommend three (3) types of development/dissemination activity: 1) a resource base of free-standing resources, a curated library of media segments accessible to anyone but with particular relevance for service providers who seek content for existing programs; 2) packaged activities that feature those media segments with wrap-around contextualizing information, for use as free-standing modules by individuals and/or through libraries and other public settings; and 3) highly produced modules that are sufficiently comprehensive to serve as mini-courses on designated topics for home use or self-study.

We have also concluded that the most viable means to address rights-related issues is to concentrate on media assets already included in the American Archive of Public Broadcasting (AAPB), at least in initial development efforts. This content features full broadcast programs (which often have fewer rights restrictions than segmented programs), and much of it is already curated and available for ready access through the Online Reading Room. The AAPB site may also be the destination through which seniors browsing the Web access these lifelong learning offerings. The ORR currently includes the following four exhibits featuring items of topical and historical significance, and additional exhibits on presidential campaigns, children's educational programming, and women's issues are currently in development:

- [Documenting and Celebrating Public Broadcasting Station Histories](#)
- [Voices from the Southern Civil Rights Movement](#), and
- [Climate Change Conversations: Cause, Impacts, Solutions](#)
- [Voices of Democracy: Public Media and Presidential Elections](#)  
(<http://americanarchive.org/exhibits/presidential-elections>)

To maximize breadth, reach and access, we recommend that other PBS stations be actively involved in both development and dissemination activities, both to include the widest array of local as well as national programming and to enhance widespread buy-in to the proposed service. Toward such ends, our research has concluded that production and distribution of templates to facilitate the packaging of local content will increase the likelihood of station involvement as well as the quality of the resulting products. The Interactive Lesson Platform (ILP) recently developed by WGBH holds significant promise for these purposes. This tool provides a means to sequence media resources and related material within a learning module. Built using open source technology, the ILP features a content management system that allows producers to create and preview content in a range of design and layout templates, upload media, and embed and author an array of tools for user engagement, such as puzzles, quizzes, note-taking, commenting, etc.— all without having to know Web coding.

We have also concluded that while formal lifelong learning programs (like Osher) might benefit from the availability of media-based resources of this type, libraries, senior centers, and retirement/assisted living communities might be better targets for this type of service, offering not only eager and readily accessible participants, but also national networks of prospectively interested partner organizations, many of which are already digitally connected.

### **Next Steps**

Clearly, additional research and rights assessments are needed to clarify need, expand answers to the who, what, and how questions, and illuminate the most viable solutions to this challenge, but sufficient information has been conducted through this planning effort to justify pursuit of support to continue exploration of possibilities. Next steps will feature such continued research as well as production/distribution of a set of prototypes to establish proof of concept. These prototypes will include both stand-alone and packaged resources of varying comprehensiveness, each pilot-tested to assess appeal and use.

Toward such ends we propose to focus especially on librarians and activity directors in retirement/assisted living communities and senior centers as both the sources of additional information and the potential users of the prototypes developed. Alliances with existing networks should also be explored, including national organizations like the American Library Association, AARP, and Senior Planet as well as local and regional providers of lifelong learning services for seniors.

Although WGBH will explore various means to support the continued development of this concept, we currently plan to apply to the Digital Projects for the Public competition through the National Endowment for the Humanities in Summer/Fall 2016 and will consider also approaching the National Archives for the support of further research and development.

## **Appendices**

- A. Launch Meeting Agenda
- B. Launch Meeting Participants
- C. Online Survey, Summary of Results
- D. Online Survey, Questions and Full Results
- E. Architectural Variables

**DIGITAL HUMANITIES FOR LIFELONG LEARNING**  
**NEH/LLL Launch Meeting**

**Agenda**  
**9/8/15**

***Pre-Meeting with PBS Representatives.*** *General discussion to surface and review issues specifically related to the use of PBS archives for the core content of possible LLL modules (topics, availability, rights, etc.) -- Louisiana Public Broadcasting, Blue Ridge PBS, and Arkansas Educational Television Network*

**11:00 Welcome** — General overview of the project, review of the purposes/agenda for the day, and discussion of the mission statement:

*To research a cost-effective solution that allows public media organizations and other humanities libraries to deliver online, media-based experiences to seniors throughout the U.S., built around the materials in our collective archives.*

**12:00 Lunch/Presentations** — Three (3) sample resource modules presented to fuel afternoon discussions: Interactive Lesson (Gulf of Tonkin), *Poetry in America*, and *Invitation to World Literature* (Gilgamesh)

**1:00 Content Challenges** — discussion responding to the following question(s):

- *What media materials and expert networks do we have to work with? What logistical issues will affect our work?*

**2:00 Audience Challenges** — discussion responding to the following question:

- *Who is our audience, where do their interests and passions in the Humanities lie, and how do they like their information packaged and delivered?*

**3:00 Design Challenges** — discussion responding to the following question:

- *How can we best use technology to reach our audience and ameliorate logistical issues?*

**4:00 Next Steps** — Identification of topics for additional research and respondents to potential survey(s) – e.g., lifelong learners, service providers

**4:30 Adjourn**

**Digital Humanities for Lifelong Learning  
Launch Meeting, September 8, 2015**

**Participants**

**Julia Anderson**, Digital Marketing Specialist, Education, WGBH

**Avi Berntein-Nahar**, Director, Osher Lifelong Learning Institute, Brandeis University

**Leslie Bourgeois**, Archivist, Louisiana Public Television

**Karen Cariani**, Director, Media Library and Archives, WGBH

**Kristi Chadwick**, Advisor for Small Libraries, Massachusetts Library System

**Steve Cohen**, Adjunct Lecturer, Tufts University, Department of History

**Amy Crownover**, Project Coordinator, Arkansas Educational Television Network

**Michael Davies**, Senior Lecturer, Engineering Systems Division, MIT

**Casey Davis**, Media Library and Archives, WGBH

**Carol Jennings**, Production, Blue Ridge PBS, Virginia

**Evie Kintzer**, Executive Director, Strategy and Business Development, WGBH

**Joanne LaPlante**, Center Communities of Brookline, Hebrew Senior Life

**Thomas Lerra**, Research & Development Prototype Manager, WGBH

**Kali Lightfoot**, Director, National Resource Center, Osher Lifelong Learning Institute, University of Southern Maine

**Mike Mayo**, Director, Research and Development, Education, WGBH

**Elisa New**, Professor of English, Harvard University

**Wichian Rojanawon**, Director, Osher Lifelong Learning Institute, University of Massachusetts, Boston

**Roberta Sheehan**, Lifelong learning enthusiast

**Ted Sicker**, Executive Producer, Education, WGBH

**Marian Weissman**, Lifelong learning enthusiast

***Digital Humanities for Lifelong Learners***  
**Survey Results, Summary**

**Most popular topics:**

- History 72%
- Fine Arts 65%
- Travel 59%
- Earth and Environment 58% Health 58%
- Science 54%
- Cooking 50%
- Music 50%

**Content formats:**

- Documentaries 90%
- Drama 60%
- Interviews 56%
- News 50%
- News (Arts & Culture) 50%

**Content length:**

- Full programs 71%
- Chapters (10-15 min.) 18%

**Accessing content:**

- Independently at home 80%
- View in a group setting 15%

**Discussion online or face to face:**

- Neither 56%
- Face to Face 22%
- Online 21%

**Viewing video content**

- Laptop 66%
- PC/desktop 53%
- iPad 42%
- iPhone 38%

**Time spent viewing video content**

- 1-2 hours/day 32%
- 2/4 hours/week 32%
- 34 respondents chose “other” because they watch video content less than 1-2 hours/day.

**Social Media Platforms**

- FB 74%
- Google+ 37%
- LinkedIn 29%
- Pinterest 23%

**Sharing content**

- Email 56%
- Word of mouth 30%

**Adding Commentary**

- Maybe 65%
- Likely 18%
- Never 16%

**Accessibility**

- Closed caption 53%
- Earphones 46%

**Age range**

- 66-75 51%
- 56-65 23%

**Respondents location**

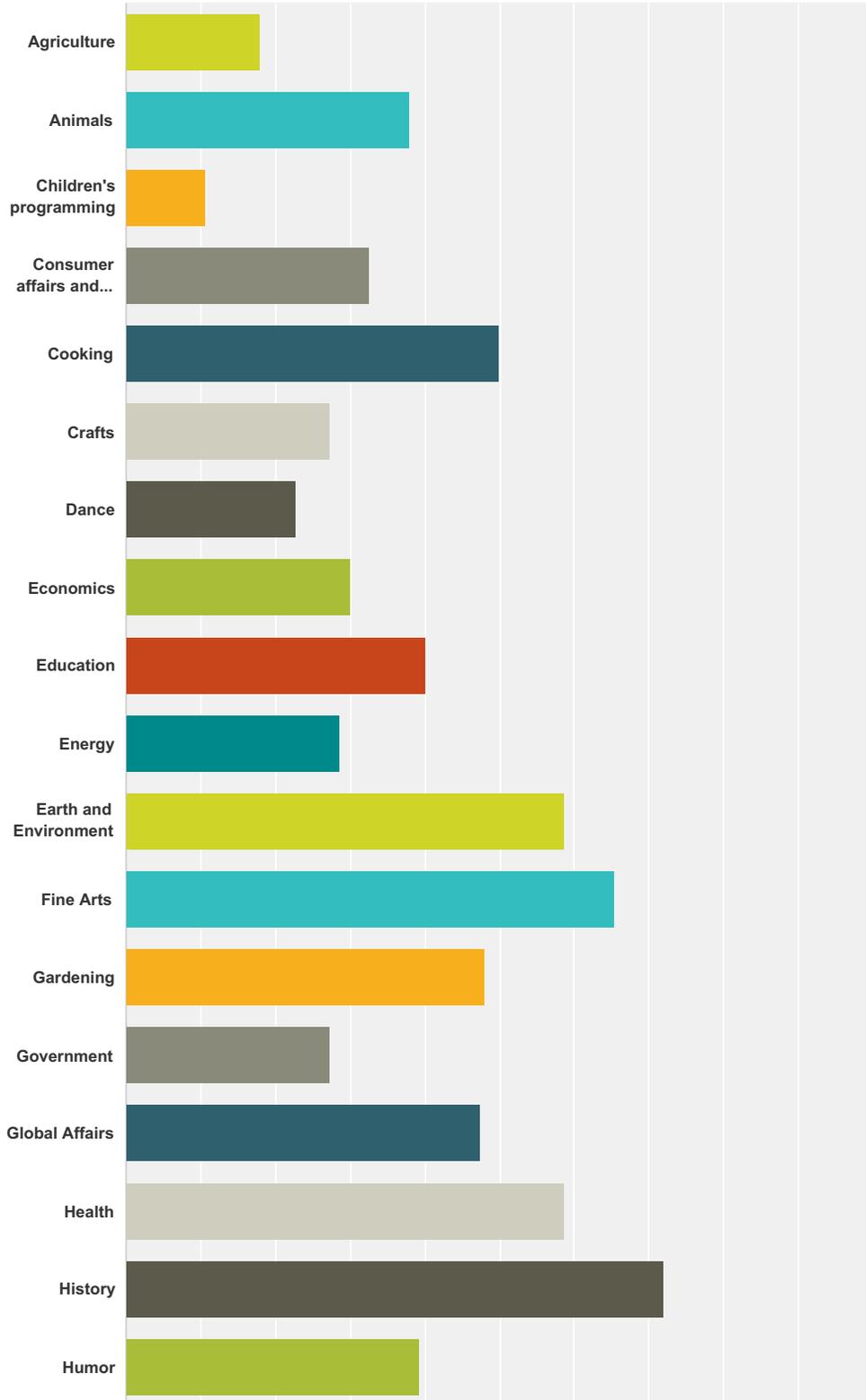
Overwhelming majority are from MA

**Bonus Question**

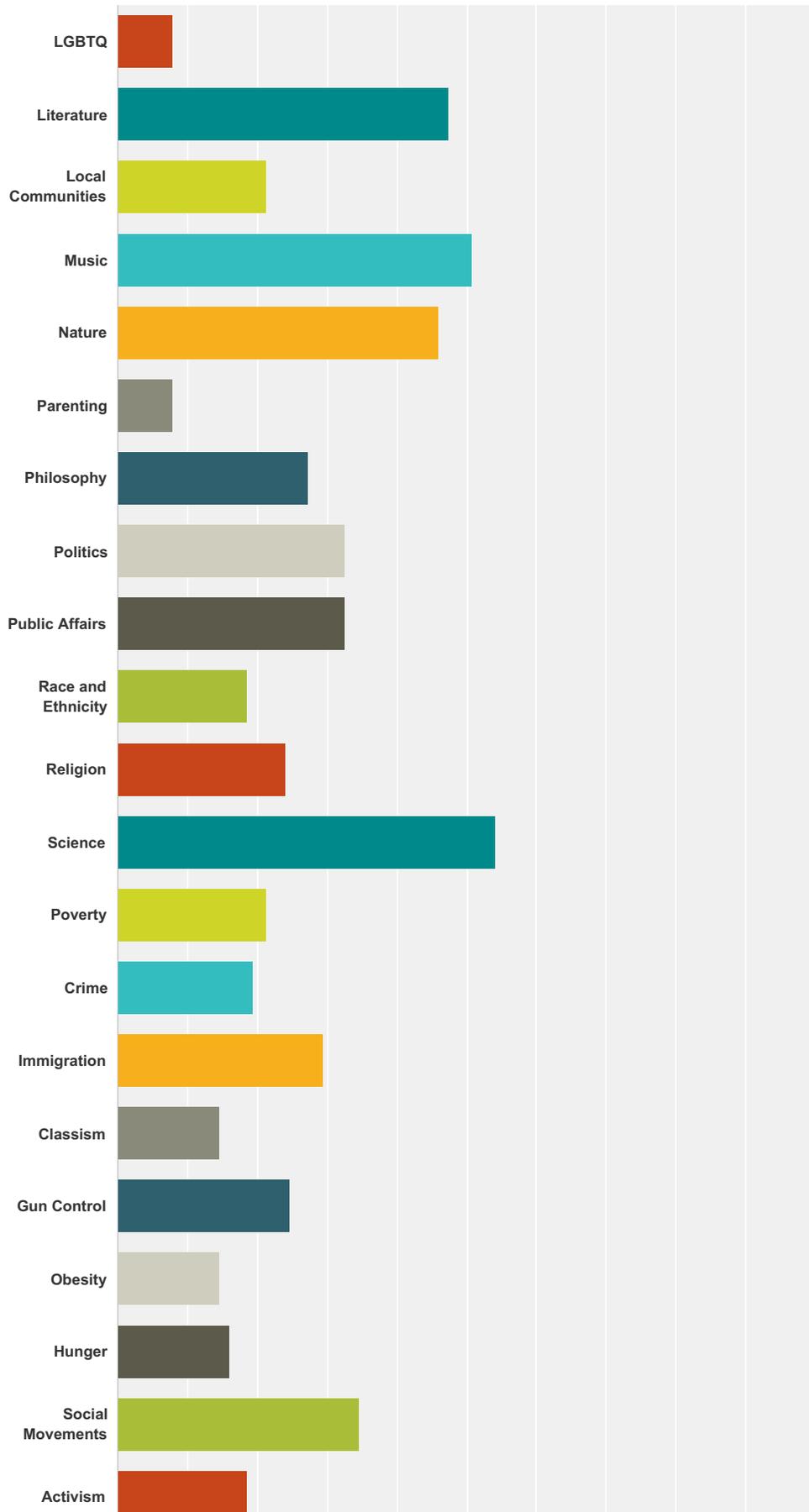
- 26 responded to “What kinds of questions might interest you?”
- 28 responded to “How might you want to make use of a module like this?”
- See the attached spreadsheet for comments

**Q1 Which Topics are you interested in learning more about (check as many as you'd like.)**

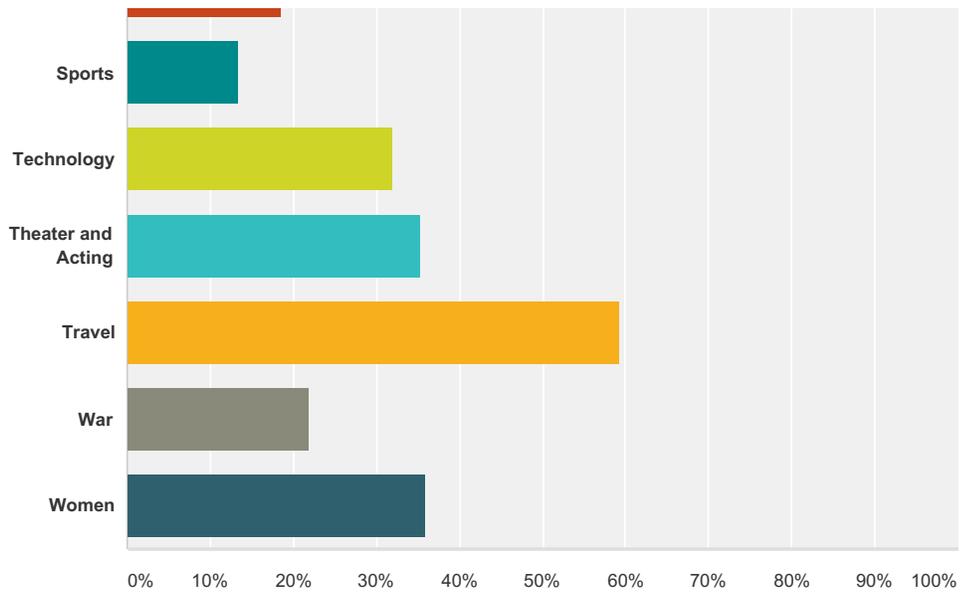
Answered: 150 Skipped: 10



# Digital Humanities for Lifelong Learners



## Digital Humanities for Lifelong Learners



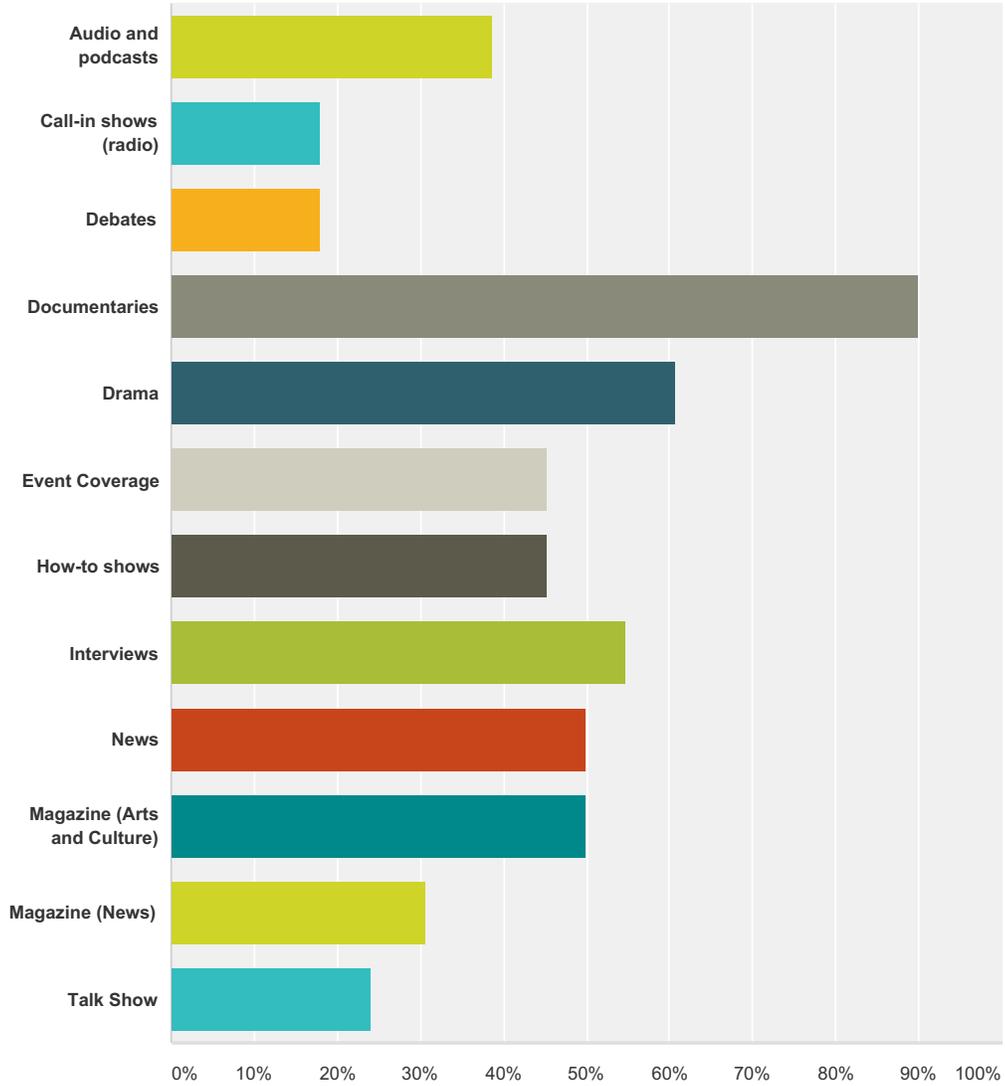
Answer Choices	Responses	Count
Agriculture	18.00%	27
Animals	38.00%	57
Children's programming	10.67%	16
Consumer affairs and advocacy	32.67%	49
Cooking	50.00%	75
Crafts	27.33%	41
Dance	22.67%	34
Economics	30.00%	45
Education	40.00%	60
Energy	28.67%	43
Earth and Environment	58.67%	88
Fine Arts	65.33%	98
Gardening	48.00%	72
Government	27.33%	41
Global Affairs	47.33%	71
Health	58.67%	88
History	72.00%	108
Humor	39.33%	59
LGBTQ	8.00%	12
Literature	47.33%	71
Local Communities	21.33%	32

## Digital Humanities for Lifelong Learners

Music	50.67%	76
Nature	46.00%	69
Parenting	8.00%	12
Philosophy	27.33%	41
Politics	32.67%	49
Public Affairs	32.67%	49
Race and Ethnicity	18.67%	28
Religion	24.00%	36
Science	54.00%	81
Poverty	21.33%	32
Crime	19.33%	29
Immigration	29.33%	44
Classism	14.67%	22
Gun Control	24.67%	37
Obesity	14.67%	22
Hunger	16.00%	24
Social Movements	34.67%	52
Activism	18.67%	28
Sports	13.33%	20
Technology	32.00%	48
Theater and Acting	35.33%	53
Travel	59.33%	89
War	22.00%	33
Women	36.00%	54
<b>Total Respondents: 150</b>		

**Q2 Which Content Formats are you interested in seeing? Please choose all that apply.**

Answered: 150 Skipped: 10



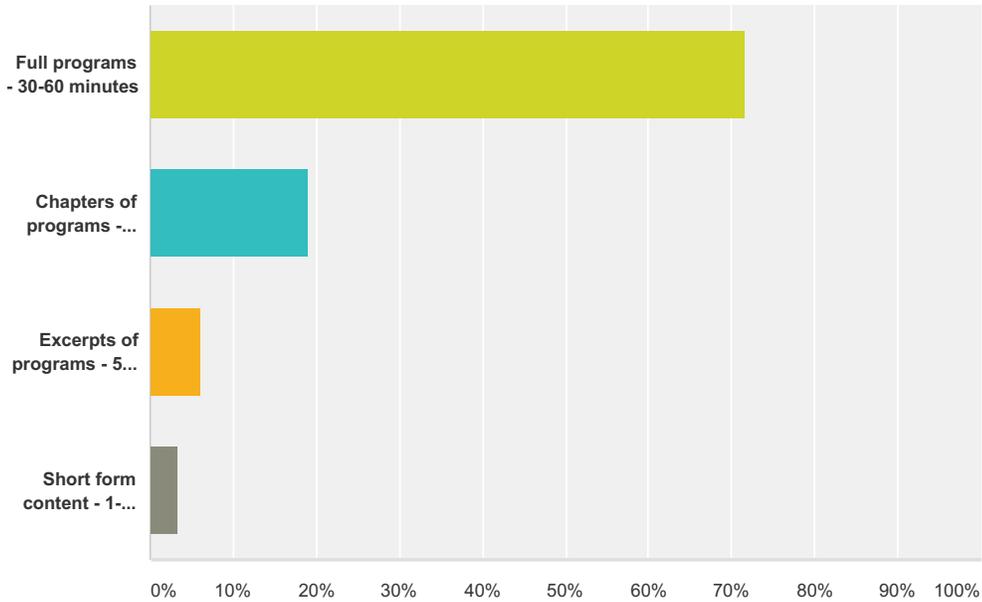
Answer Choices	Responses
Audio and podcasts	38.67% 58
Call-in shows (radio)	18.00% 27
Debates	18.00% 27
Documentaries	90.00% 135
Drama	60.67% 91
Event Coverage	45.33% 68

## Digital Humanities for Lifelong Learners

How-to shows	45.33%	68
Interviews	54.67%	82
News	50.00%	75
Magazine (Arts and Culture)	50.00%	75
Magazine (News)	30.67%	46
Talk Show	24.00%	36
<b>Total Respondents: 150</b>		

**Q3 Which Content Length interests you the most? Please choose up to two responses.**

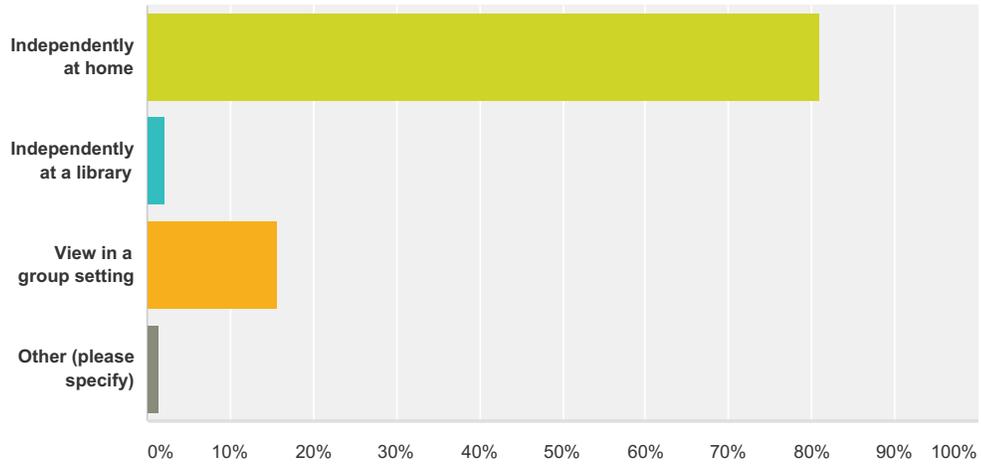
Answered: 148 Skipped: 12



Answer Choices	Responses
Full programs - 30-60 minutes	71.62% 106
Chapters of programs - 10-15 minutes	18.92% 28
Excerpts of programs - 5-10 minutes	6.08% 9
Short form content - 1-5 minutes	3.38% 5
<b>Total</b>	<b>148</b>

**Q4 How would you like to Access this Content - independently from home or a library, or a periodic meet-up with a group?  
Please choose one response.**

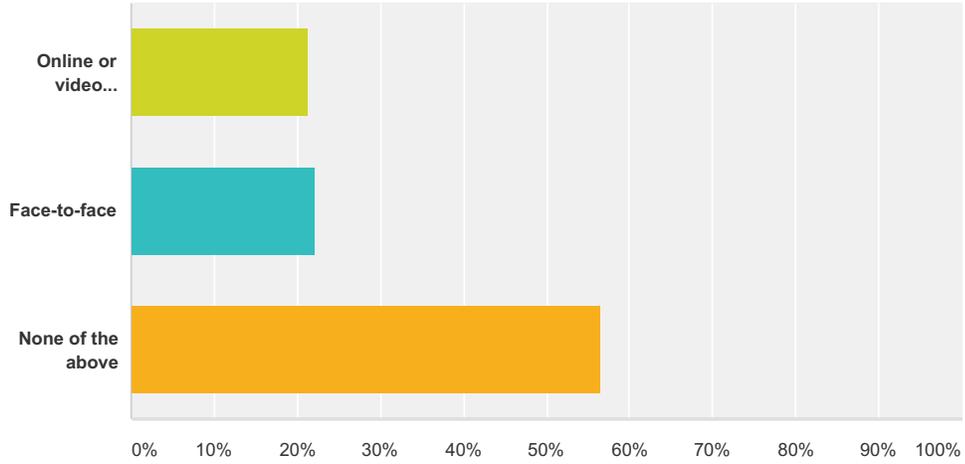
Answered: 147 Skipped: 13



Answer Choices	Responses
Independently at home	80.95% 119
Independently at a library	2.04% 3
View in a group setting	15.65% 23
Other (please specify)	1.36% 2
<b>Total</b>	<b>147</b>

**Q5 After viewing the content would you want to take part in an online Discussion or Chat, or would you prefer to do this face-to-face? Please choose one response.**

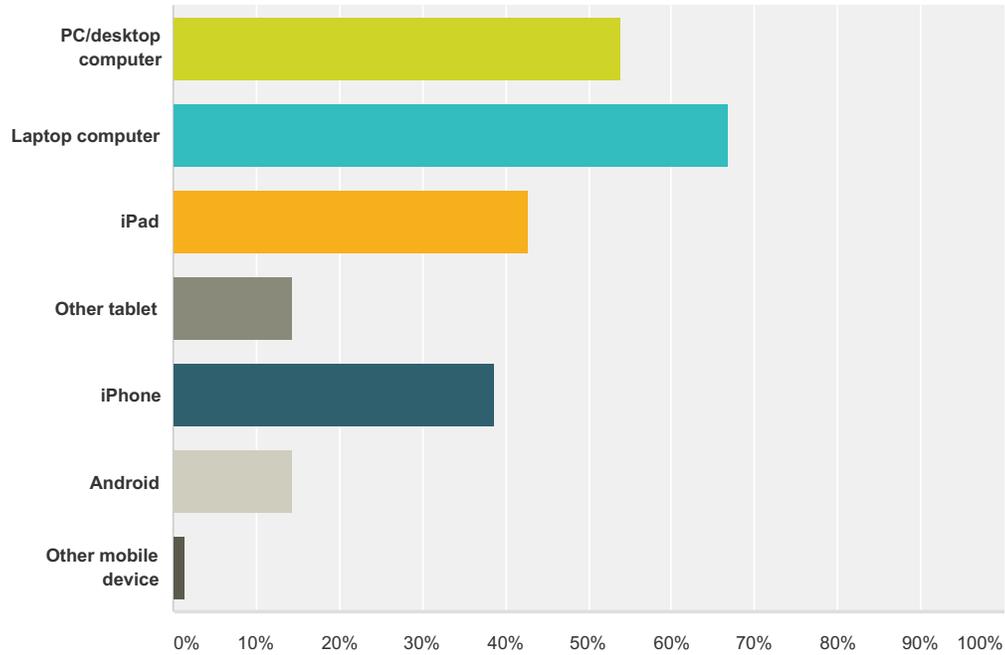
Answered: 145 Skipped: 15



Answer Choices	Responses	
Online or video discussion	21.38%	31
Face-to-face	22.07%	32
None of the above	56.55%	82
<b>Total</b>		<b>145</b>

**Q6 Are you comfortable using Technology? If yes, how do you currently view video content? Check all that apply.**

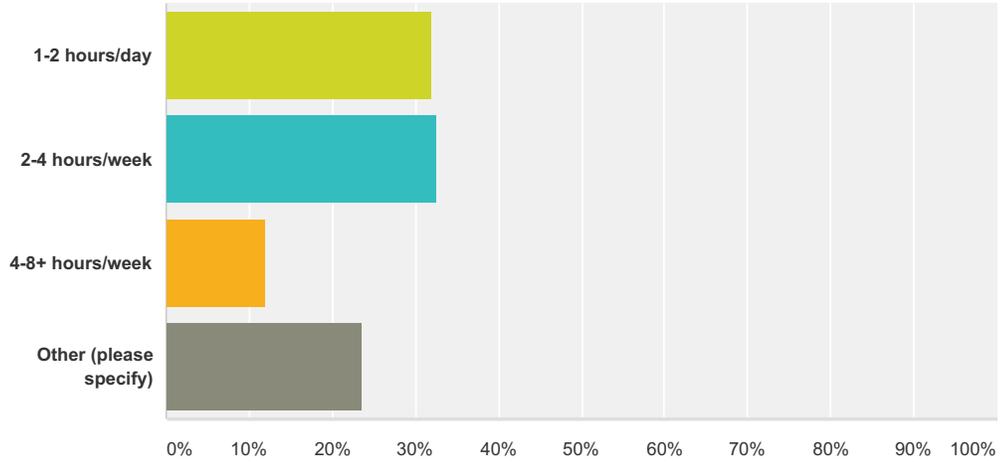
Answered: 145 Skipped: 15



Answer Choices	Responses	Count
PC/desktop computer	53.79%	78
Laptop computer	66.90%	97
iPad	42.76%	62
Other tablet	14.48%	21
iPhone	38.62%	56
Android	14.48%	21
Other mobile device	1.38%	2
<b>Total Respondents: 145</b>		

### Q7 Approximately how much time do you spend viewing video content on your preferred device?

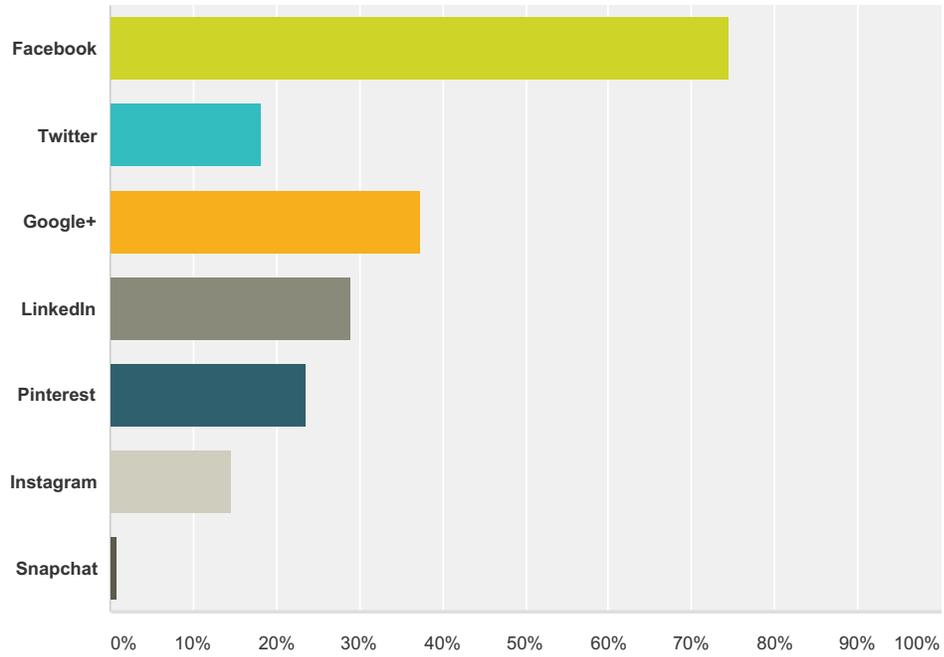
Answered: 144 Skipped: 16



Answer Choices	Responses
1-2 hours/day	31.94% 46
2-4 hours/week	32.64% 47
4-8+ hours/week	11.81% 17
Other (please specify)	23.61% 34
<b>Total</b>	<b>144</b>

**Q8 What Social Platforms do you use, if any? Please check all that apply.**

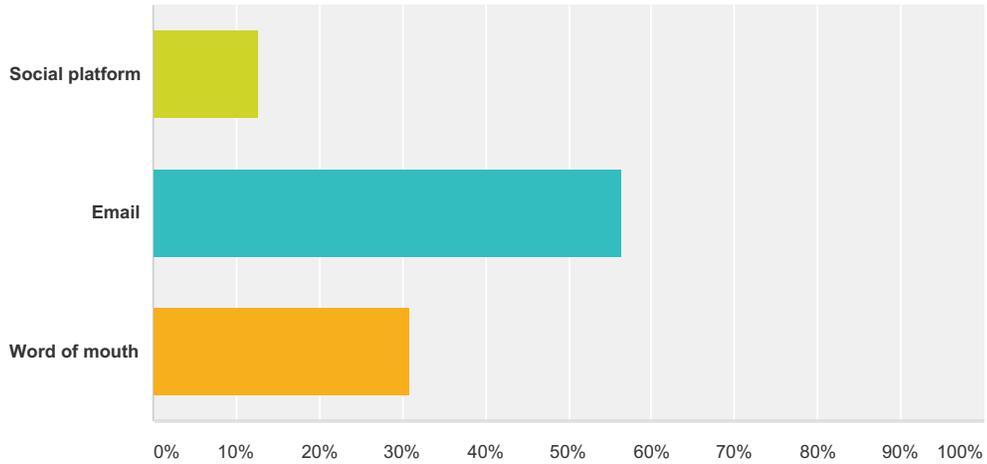
Answered: 110 Skipped: 50



Answer Choices	Responses	Count
Facebook	74.55%	82
Twitter	18.18%	20
Google+	37.27%	41
LinkedIn	29.09%	32
Pinterest	23.64%	26
Instagram	14.55%	16
Snapchat	0.91%	1
<b>Total Respondents: 110</b>		

**Q9 Would you use a social platform to share content you like, or would you share via email or word of mouth? Please choose one response.**

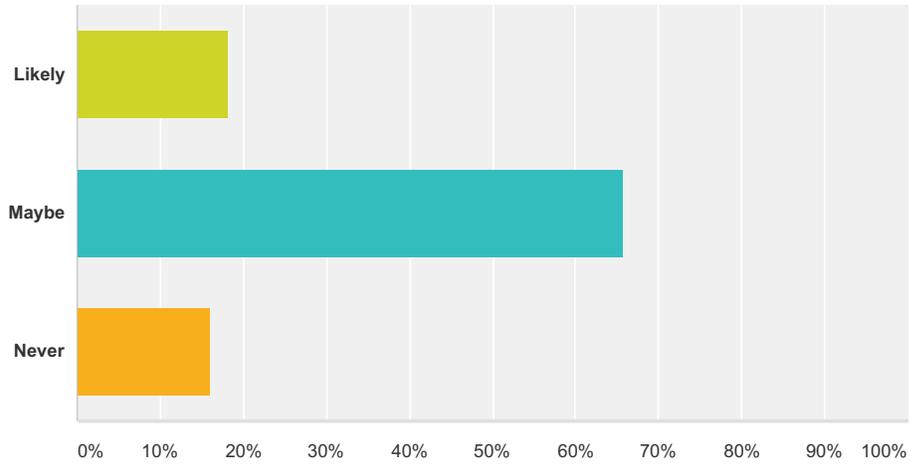
Answered: 142 Skipped: 18



Answer Choices	Responses	
Social platform	12.68%	18
Email	56.34%	80
Word of mouth	30.99%	44
<b>Total</b>		<b>142</b>

### Q10 How likely would you be to add Commentary to content if given an easy method to do so?

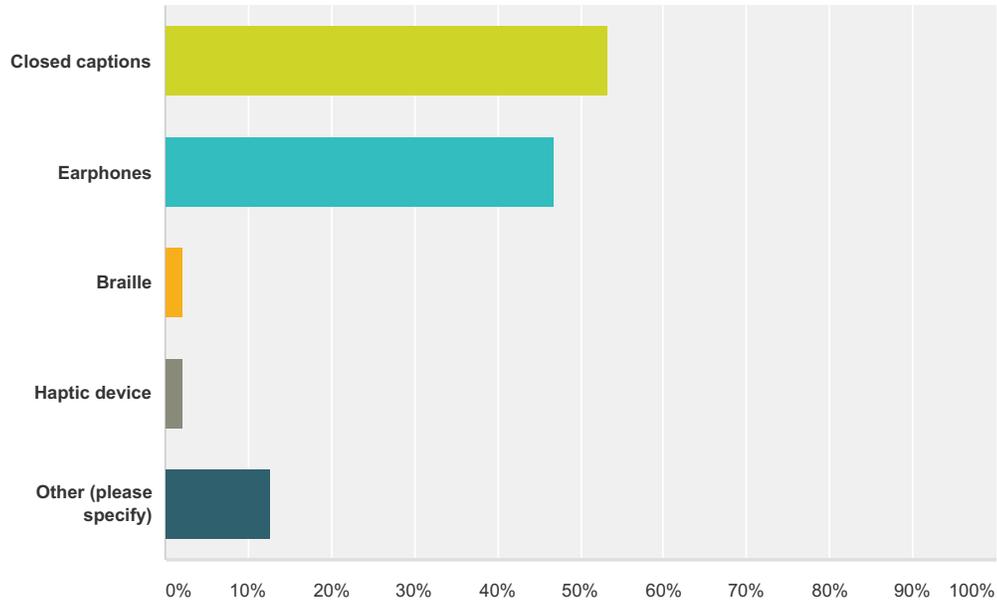
Answered: 149 Skipped: 11



Answer Choices	Responses
Likely	18.12% 27
Maybe	65.77% 98
Never	16.11% 24
<b>Total</b>	<b>149</b>

**Q11 What kind of Accessibility Features do you use, if any? Please check all that apply.**

Answered: 47 Skipped: 113



Answer Choices	Responses	Count
Closed captions	53.19%	25
Earphones	46.81%	22
Braille	2.13%	1
Haptic device	2.13%	1
Other (please specify)	12.77%	6
<b>Total Respondents: 47</b>		

**Q12 BONUS QUESTIONS! If you have time, we created a short prototype that you can view here: <http://goo.gl/qqdkvP> After you have viewed it, please let us know:**

Answered: 33 Skipped: 127

Answer Choices	Responses	
What kinds of questions might interest you?	78.79%	26
How might you want to make use of a module like this?	84.85%	28

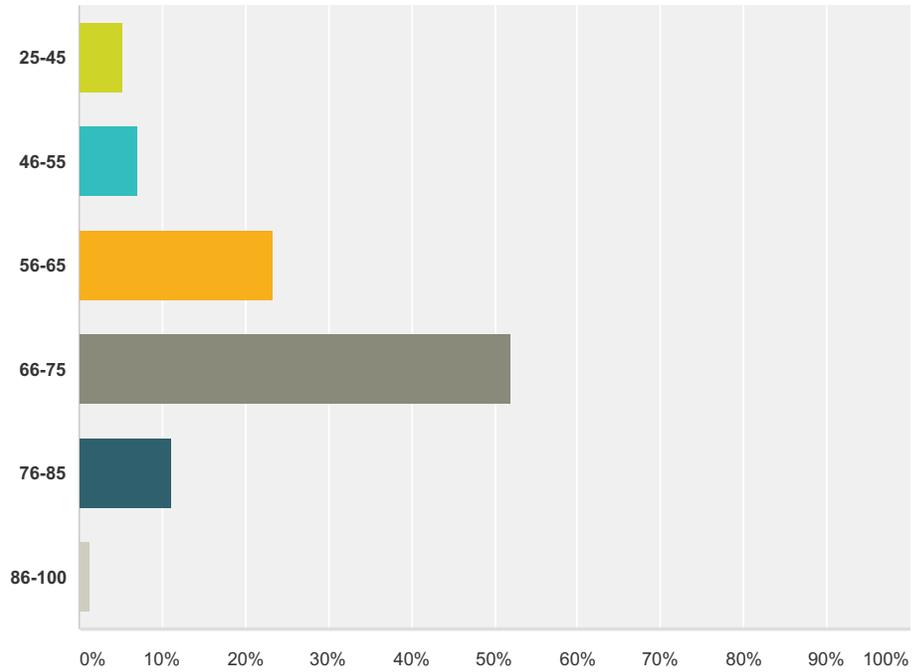
### Q13 Helpful information:

Answered: 139 Skipped: 21

Answer Choices	Responses	
Name	0.00%	0
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	91.37%	127
State/Province	92.09%	128
ZIP/Postal Code	92.81%	129
Country	0.00%	0
	0.00%	0
Phone Number	0.00%	0

### Q14 More helpful information! What is your age range?

Answered: 154 Skipped: 6



Answer Choices	Responses	
25-45	5.19%	8
46-55	7.14%	11
56-65	23.38%	36
66-75	51.95%	80
76-85	11.04%	17
86-100	1.30%	2
<b>Total</b>		<b>154</b>

**Q15 Please let us know any additional thoughts you have about public media video resources for lifelong learning.**

Answered: 24 Skipped: 136

**Q16 Optional! If you would like to receive the results of this survey, please let us know your name and email address.**

Answered: 45 Skipped: 115

Answer Choices	Responses
Name	95.56% 43
Email	97.78% 44

Smartphone Natives

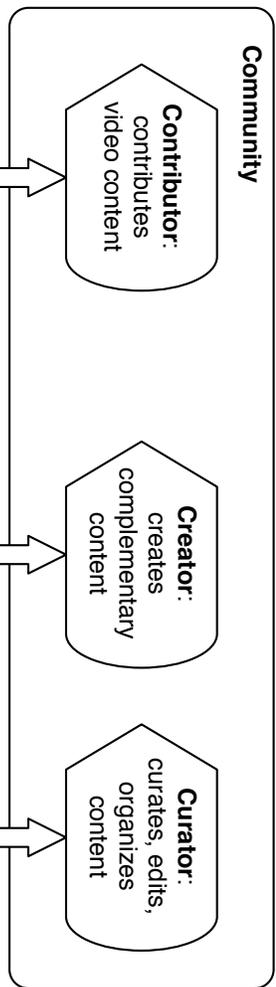
Digital Natives

Digital Immigrants

'Mixed-Signal'

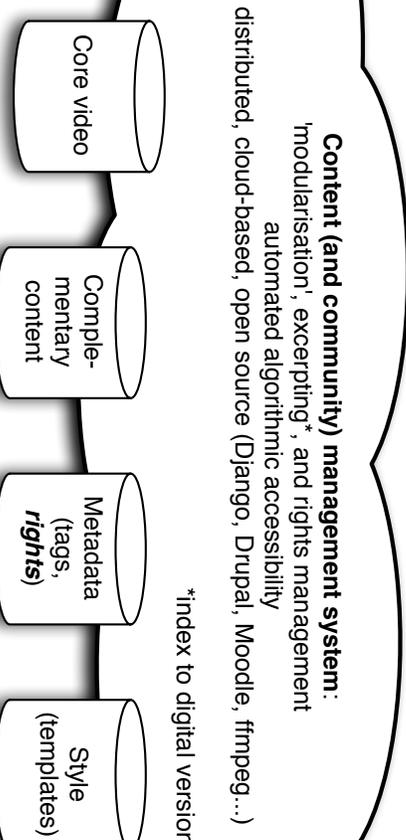
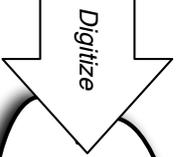
Analogs

Community



**Archives**

Public media organisations and other humanities libraries



Core video

Complementary content

Metadata (tags, rights)

Style (templates)

Community

~4.7"

~5.1"

~5.7"



1080p screen resolution

